

Amendments to the Claims

The following claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (withdrawn) A composition comprising an isolated human polynucleotide from human brain selected from the group consisting of:

(a) a polynucleotide comprising the potassium channel Kv4.3 nucleotide sequence set forth in SEQ. ID NO. 1 or in SEQ. ID NO. 3, deposited under accession number ATCC-_____;

(b) a polynucleotide having at least 90% identity over its entire length to a polynucleotide encoding a potassium channel Kv4.3 polypeptide of SEQ ID NO: 2 or SEQ ID NO: 4;

(c) a polynucleotide which is an allelic variant of the polynucleotide of (a)-(b) above; and

(d) a polynucleotide capable of hybridizing under stringent conditions to any one of the polynucleotides specified in (a)-(c).

2. (withdrawn) An isolated DNA molecule encoding a Kv4.3 potassium channel polypeptide having the amino acid sequence set forth in SEQ ID NO: 2 or SEQ ID NO: 4.

3. (withdrawn) The isolated DNA sequence of claim 2, having the nucleotide sequence set forth in SEQ ID NO: 1 or SEQ ID NO: 3.

4. (withdrawn) The polynucleotide of claim 1 wherein said polynucleotide is operably linked to at least one expression control sequence.

5. (withdrawn) A host cell transformed with the polynucleotide of claim 1.

6. (withdrawn) The host cell of claim 5 wherein said cell is a prokaryotic or eukaryotic cell.

7. (withdrawn) A process for producing a Kv4.3 potassium channel polypeptide comprising the steps of introducing the polynucleotide of claim 1 into a host cell, growing a culture of the host cell in a culture medium so that said host expresses the Kv4.3 polypeptide, and purifying the polypeptide from the culture medium or host cell.

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